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Subject-specific study and examination regulations for the bachelor's programme in Molecular Medicine and the English-taught master's programme in Molecular Medicine offered by the Medical Faculty of Ulm University dated 10 July 2025

Based on § 32 (3) sentence 1 of the Federal State Higher Education Act Baden-Württemberg (*Landeshochschulgesetz,* LHG) in the version of 1 January 2005 (law gazette pages 1 ff, amended several times, last amended by article 24 of the ordinance of 17 December 2024 (law gazette p. 114), the Senate of Ulm University, upon the approval of the Medical Faculty at Ulm University, adopted the following subject-specific study and examination regulations (FSPO) for the bachelor's programme in Molecular Medicine and the English-taught master's programme in Molecular Medicine in its meeting on 25 June 2025.

The President of Ulm University gave his consent on 10 July 2025 in accordance with § 32 (3) sentence 1 of the *LHG*.

Content

I. General

§ 1 Scope of application (§ 1 ASPO)

This FSPO for the bachelor's programme in Molecular Medicine and the English-taught master's programme in Molecular Medicine supplements and specifies the provisions of the General Study and Examination Regulations of Ulm University (Allgemeine Studien- und Prüfungsordnung der Universität Ulm, ASPO).

§ 2 Study objectives (§ 2 ASPO)

(1) [1]The bachelor's programme in Molecular Medicine aims to enable bachelor's graduates to use the knowledge and expertise they have acquired to place biomedical problems in a scientific and specialist context and to solve them using the methods of molecular and cell biology as well as genomics and proteomics. [2]The educational objective is to acquire fundamental knowledge and skills that qualify graduates for activities in the field of research, development and application in molecular medicine, as well as for a corresponding master's programme as a continuation of their education.

(2) [1]The master's programme in Molecular Medicine is a research-oriented programme. [2]Building upon biomedical, molecularly oriented undergraduate studies, it aims to enable graduates to solve biomedical problems independently applying the methods of molecular and cell biology. [3]The aim of the programme is the acquisition of knowledge and skills qualifying graduates for activities in research, development and application in the areas of molecular medicine, in particular at universities, research institutes and in relevant research industries. [4]Participants in the joint/double degree master's programme should also acquire additional intercultural skills and enhanced communication and cooperation skills with international scientists. [5]In addition, students have the opportunity to specialise in specific areas of biomedical research.

§ 3 Start of the programmes (§ 3 ASPO)

The bachelor's degree programme in Molecular Medicine and the English- taught master's degree programme in Molecular Medicine both begin in the winter semester.

II. Study organisation

§ 4 Organisation and content of the bachelor's programme in Molecular Medicine (§ 4 ASPO)

(1) The following compulsory, compulsory elective and complementary modules must be completed:

No.	**Area/**module/*exam*	**CP**	**SWS/type of LV/**	**Type of exam**	**FS**
A	**Compulsory area**	**177**			
1	Physics I for natural scientists	7	2VL, 2Ü	P1	1
2	Physics II for Molecular Medicine	7			
2a	*Physics II for Molecular Medicine*	*4*	*2 VL, 1 S*	*P1*	*2*
2b	*Lab course Physics II for Molecular Medicine*	*3*	*3 P*	*LN*	*2*
3	Mathematics for Natural Sciences	8			
3a	*Mathematics for Natural Sciences I*	*4*	*2VL, 1Ü*	*P1*	*1*
No.	**Area/**module	**CP**	**SWS/type of LV/**	**Type of exam**	**FS**
3b	*Mathematics for Natural Sciences II*	*4*	*2VL, 1Ü*	*P1*	*2*

4	General Chemistry for Molecular Medicine	11			
4a	*General chemistry*	*7*	*4VL, 1S*	*P1*	*1*
4b	*Introductory lab course inorganic chemistry*	*4*	*5P*	*LN*	*2*
5	Inorganic chemistry	7	2VL, 1S	P1	2
6	Anatomy A: Macroscopic anatomy	5	4VL	P2	1
7	Anatomy B: Microscopic anatomy	8	3VL, 4P	P2	4
8	Biochemistry and Molecular Biology I	5	3VL, 2S	P2	1
9	Topics in Molecular Medicine	5			
9a	*Topics in Molecular Medicine I*	*1*	*1VL*	*P2*	*1*
9b	*Topics in Molecular Medicine II*	*1*	*1VL*	*P2*	*2*
9c	*Project*	*3*	*1P*	*LN*	*2*
10	Human genetics	5			
10a	*Introduction to human genetics*	*2*	*2VL*	*P2*	*3*
10b	*Mechanisms of genetically determined diseases*	*3*	*1VL, 1S*	*P2*	*4*
11	Molecular medicine as an experimental science	4			
11a	*History and theory of the experimental sciences*	*2*	*2 S*	*P2*	*2*
11b	*Animal experimentation*	*2*	*1S, 1P*	*P2*	*3*
12	Microbiology, virology, vector biology	8			
12a	*Microbiology, virology, vector biology*	*5*	*2VL, 2S*	*P2*	*3*
12b	*Microbiology, virology, vector biology*	*3*	*3P*	*LN*	*3*
13	Biometrics and bioinformatics	10	3VL, 3Ü	P1	3
14	Biochemistry and Molecular Biology II	8			
14a	*Biochemistry II*	*8*	*3VL*	*P2*	*3*
14b	*Biochemistry III*		*4VL*		*4*
15	Methods course in Molecular Medicine	12			
15a	*Methods course in Molecular Medicine: Biochemistry part*	*3*	*2P, 1S*	*LN*	*4*
15b	*Methods course in Molecular Medicine - Pathology part*	*3*	*2P, 1S*	*LN*	*4*
15c	*Methods course in Molecular Medicine - Human genetics part*	*6*	*4P, 1S*	*LN*	*4*
No.	**Area/**module/	**CP**	**SWS/type of LV/**	**Type of exam**	**FS**
16	Physiology I: Neurophysiology	8			**4**
16a	*Physiology I: Fundamentals of neurophysiology*	*5*	*4VL*	*P2*	2
16b	*Lab course neurophysiology*	*3*	*2,86P*	*LN*	*3*
17	Physiology II: Vegetative physiology	8			

17a	*Physiology II: Vegetative physiology*	*5*	*4VL*	*P2*	*4*
17b	*Lab course vegetative physiology*	*3*	*2,29P*	*LN*	*5*
18	Immunology	7			
18a	*Immunology*	*4*	2VL,2S	P2	5
18b	*Lab course immunology*	*3*	*6P*	*LN*	*5*
19	Pharmacology and toxicology	8			
19a	*Pharmacology and toxicology I*	*4*	*3VL*	*P2*	*5*
19b	*Pharmacology and toxicology II*	*4*	*3VL*	*P2*	*6*
20	Molecular pathogenesis and therapy	10	7S	P2	5
21	Academic work	4			
21a	*Presentation and moderation techniques*	*2*	*1S*	*LN*	*2*
21b	*Academic writing*	*2*	*2S*	*LN*	*6*
22	Professional internship	10		LN	6
23	Final thesis	12			
23a	*Bachelor's thesis*	*12*		*P2*	*6*
B	**Complementary area**	**min. 3**			
	Total CP	min. 180			

FS = semester (in the programme); LN = ungraded certificate; CP = credit points; LV = course (any type); P1 = graded exam counting towards final grade with simple weighting; P2 = graded exam counting double towards the final grade; S = seminar; P = lab course/internship, Ü = exercises; VL = lecture, SWS = classroom hours per week (semester);

(2) In the the complementary area, students must complete modules of their choice from the courses offered by the Humboldt Study Centre for Philosophy and Humanities and the Centre for Languages and Philology worth at least 3 CP.

(3) The supervisor ratios for the formal calculation of the teaching workload are fixed as follows : Lecture, lab course, seminar, exercises: up to 50 students.

§ 5 Organisation and content of the English-taught master's programme in Molecular Medicine (§ 4 ASPO)

(1) The following compulsory, compulsory elective and complementary modules must be completed:

No.	Area/module/*exam*	CP
A	**Compulsory area[1]**	**87**
A1	**Compulsory Modules**	**57**
1	Practical Training in Laboratory Methods	9
2	Bioethics, Philosophy and Good Practice of Science	6
3	Clinical Trials, Project Management and Funding	6
4	Molecular Oncology	12
4a	*Four-week research internship*	*9*
4b	*Seminar*	*3*
5	Trauma and Infection	12
5a	*Four-week research internship*	*9*
5b	*Seminar*	*3*
6	Cell biology	12
6a	*Four-week research internship*	*9*
6b	*seminar*	*3*
A2	**Master's Thesis[2]**	**30**
7	Master's thesis	20
8	Oral defence	10
B	**Compulsory Elective Area[3]**	**min. 30**
9	Molecular Oncology II	12
9a	*Four-week research internship*	*9*
9b	*Seminar*	*3*
10	Toxicology	12
10a	*Four-week research internship*	*9*
10b	*Seminar*	*3*
11	Compulsory Elective Modules to Molecular Medicine	18
C	**Complementary Area[4]**	**min. 3**
	Total	120

(2) [1]In the complementary area C, modules worth at least 30 CP must be completed from the module catalogue provided for this purpose. [2]Students must complete at least one of the two modules Molecular Oncology II (9) or Toxicology (10) worth 12 CP.

(3) In the complementary area C, modules worth at least 3 CP must be completed from the module catalogue provided for this purpose.

[1] Corresponds to "Pflichtbereich" in German

[2] Corresponds to "Abschlussarbeit" in German

[3] Corresponds to "Wahlpflichtbereich" in German

[4] Corresponds to "Ergänzungsbereich" in German

(4) [1]Modules can be assigned to specialisations. [2]A specialisation is oriented to the research priorities of Molecular Medicine. [3]The modules assigned to a specialisation are specified in the study curriculum and module catalogue. [4]Upon successful completion of the modules assigned to a specialisation, the student will receive, upon request, a certificate issued by the *Studiensekretariat* (student administration and examinations office) together with the degree documents.

(5) [1]With the approval (prior consent) of the Molecular Medicine examination board, it is possible to complete equivalent external research internships (four-week research internships). [2]The subject examination board can recognise up to 50% of such research internships upon request.

(6) It is not possible to change the internship position after the start of the four-week research internship.

(7) Participation in a double degree programme in accordance with the respective cooperation agreement or the option of completing the research internship or master's thesis externally is provided as a mobility window.

(8) The language of instruction and examinations is English. In the complementary area (C) in accordance with § 5 (1) of the master's programme, German-taught modules can also be selected from the module catalogue provided for this purpose.

§ 6 Compulsory attendance at courses (§ 7 ASPO)

[1]Attendance is compulsory for practical courses, excursions, seminars and exercises as part of the coursework. [2]Students who do not attend at least 85% of such courses will not be admitted to the corresponding module examination or will not be deemed to have completed the coursework. [3]If there are reasons for absences for which the student is not responsible, then

a. the absence can be compensated for by a competency-based substitute achievement,
b. individual classes can be made up for,
c. parts already completed from previous courses can be credited.

[4]The course responsible will check whether compensation is possible in accordance with sentence 3. [5]If no substitute performance is offered/individual event is made up for or not fulfilled or if crediting is excluded, the coursework is deemed to not be completed.

§ 7 Deadlines (§ 8 (1) and (2) ASPO)

(1) Students enrolled in the bachelor's programme in Molecular Medicine who have not earned at least 35 CP from the modules specified in § 4 (1) by the end of the second examination period of each academic year will lose their right to examination, unless they are not responsible for exceeding the deadline.

(2) Students in the bachelor's programme in Molecular Medicine who have not successfully completed the compulsory module "Topics in Molecular Medicine" in accordance with § 4 (1) No. 9 by the end of the second examination period of the third semester will lose their right to examination, unless they are not responsible for exceeding the deadline.

(3) Students enrolled in the English-taught master's programme in Molecular Medicine who have not earned at least 60 CP from the modules listed in § 5 (1) by the end of the second examination period of the fourth semester will lose their right to examination unless they are not responsible for exceeding the deadline.

III. Exams

§ 8 Thesis (§ 18 ASPO)

(1) Students may only be admitted to the bachelor's thesis if they have earned at least 120 CP from the modules listed in § 4 (1).

(2) Only students who have completed areas A1, B and C in accordance with § 5 (1) with the required minimum number of 90 credit points may be admitted to the master's thesis.

(3) [1]The bachelor's thesis is assessed by two examiners. [2]The two examiners of the bachelor's thesis may not belong to the same research group. [3]The time from admission to submission of the bachelor's thesis is ten weeks.

(4) [1]The time from admission to submission of the master's thesis is six months. [2]The two examiners of the master's thesis may not belong to the same research group.

(5) [1]An external bachelor's or master's thesis is possible upon application to the Molecular Medicine Examination Board. [2]At least one examiner must be employed at Ulm University and be responsible for supervising and assessing the content of the thesis. [3]With the approval (prior consent) of the Molecular Medicine examination board, the bachelor's and master's theses may be completed at an external institution. [4]An application for admission to an external bachelor's or master's thesis must be submitted to the subject examination board before work begins, together with a one-page synopsis and written confirmation of supervision from the examiner at Ulm University.

(6) [1]The master's thesis is complemented by a defence open to the university public. [2]The defence takes place before an examination committee. [3]This committee consists of two examiners who are members of the Molecular Medicine examination board and the two examiners of the master's thesis. [4]As a rule, the defence should not exceed 60 minutes and is conducted in English. [5]During the defence, the student gives a free presentation of up to 25 minutes on the topic of their master's thesis and is then questioned by the examination committee.

(7) [1]Each member of the examination committee assesses the student's performance. [2]The grade of the oral examination is the mean of the examiners' individual evaluations. [3]The defence is passed if the final evaluation is at least "sufficient - 4.0".

(8) [1]A disputation graded as "not sufficient - 5.0" may be repeated once within 3 months of the failed attempt. [2]If this deadline is not met, students lose their right to examination unless they are not responsible for exceeding the deadline.

(9) [1]The bachelor's thesis can be written in English if the examiner agrees. [2]The master's thesis is written in English.

§ 9 Thesis in a joint/double-degree master's programme

(1) During completion of the master's thesis, supervision is conducted by an examiner from Ulm University and an examiner from the foreign university.

(2) If the master's thesis is completed at Ulm University in accordance with § 8, submission of the master's thesis is governed by the provisions of these regulations.

(3) If the master's thesis is completed at a foreign university, submission of the master's thesis is governed by the relevant provisions of the foreign university. § 18 (6) sentence 1 of the ASPO remains unaffected.

§ 10 Final grade (§ 24 (6) ASPO)

(1) [1]All graded examinations from the compulsory area are included in the overall grade for the bachelor's programme. [2]Examinations marked "P1" in § 4 (1) are weighted once with the corresponding credit points, and examinations marked "P2" in § 4 (1) are weighted double with the corresponding credit points.

(2) [1]The overall grade for the master's programme is calculated based on the graded compulsory modules (A), the highest-rated modules from the compulsory elective area (B) with 30 CP, and the highest-rated modules from the complementary area (C) with 3 CP, in accordance with § 5 (1). [2]The module exceeding the total volume of 30 CP from the compulsory elective area and the

module exceeding the total volume of 3 CP from the complementary area are only included with the credit points necessary to achieve the respective minimum number of points.

§ 11 Repetition of module examinations (§ 25 ASPO)

In the bachelor's programme in Molecular Medicine, two passed compulsory written module examinations may be repeated once each by the end of the examination period of the sixth semester in order to improve the grade in the next written examination. The better of the two passed examinations will be taken into account. It is not possible to repeat the bachelor's thesis in order to improve the grade.

IV. Final provisions

§ 12 Effective date

(1) [1]These study and examination regulations apply with effect from the winter semester 2025/26. [2]At the same time, the Subject-specific study and examination regulations for the bachelor's programme in Molecular Medicine offered by the Medical Faculty of Ulm University dated 7 June 2019, published in the Official Bulletin of Ulm University no. 16 of 17 June 2019, pages 175 – 182 and the Subject-specific study and examination regulations for the English-taught master's programme in Molecular Medicine offered by the Medical Faculty of Ulm University of 7 June 2019, published in the Official Bulletin of Ulm University no. 16 of 17 June 2019, pages 191 – 199 will cease to apply subject to paragraphs 2 and 3.

(2) § 8 (3) sentences 1 and 2 do not apply to students in the bachelor's programme in Molecular Medicine who were admitted to the bachelor's thesis at the time of entry into force.

(3) [1]For students who were enrolled in the English-taught master's programme in Molecular Medicine at Ulm University in the summer semester of 2025, the subject-specific study and examination regulations for the English-taught master's programme in Molecular Medicine at the Medical Faculty of Ulm University dated 7 June 2019, published in the Official Bulletin of Ulm University no. 16 of 17 June 2019, pages 191 - 199, shall continue to apply on a transitional basis. [2]At the end of the second examination period of the summer semester 2029 (deadline: 1 December 2029), the subject-specific study and examination regulations for the English-taught master's programme in Molecular Medicine at the Medical Faculty of Ulm University dated 7 June 2019, published in the Official Bulletin of Ulm University no. 16 of 17 June 2019, pages 191 - 199, will finally cease to apply. [3]The students referred to in sentence 1 will then continue the programme pursuant to paragraph 1 sentence 1 of these study and examination regulations. [4]The subject examination board shall decide on the recognition of achievements already completed by then.

Ulm, this 10 July 2025

Prof. Dr.-Ing. Michael Weber
-President-